

CLAIMS

What is claimed is:

1. A method to at least specify, document and prototype an instrument having specific user interface elements to meet individual customer/market needs, comprising displaying, with a graphical user interface, an image of a customer-selected instrument type; enabling the customer to specify, with the graphical user interface, individual ones of a plurality of instrument parameters in a self-documenting fashion; in response to a selection of at least one type of instrument parameter, updating the displayed image to correspond to the selected instrument parameter; and developing at least one prototype instrument for the customer based on the selected parameters and the self-documentation.

2. A method as in claim 1, further comprising manufacturing an instrument based on the selected instrument parameters and the self-documentation.

3. A method to specify a gauge, comprising:

in response to a user accessing a server coupled to a data communications network, displaying an image of a user-selected gauge type;

specifying individual ones of gauge functions using a plurality of drop down menus; and

in response to a selection of at least one type of gauge function, changing the displayed image to correspond to the selected gauge function.

4. A method as in claim 3, further comprising preparing at least one sample of the selected gauge type in accordance with the selected gauge functions.

5. A method to specify a gauge, comprising:

in response to a user accessing a server coupled to the network, displaying an image of a user-selected gauge type;

displaying in association with the selected gauge type a set of visual aids corresponding to configurable gauge functions;

specifying individual ones of the configurable gauge functions using said set of visual aids and a drag and drop technique for selecting individual visual aids from the set of visual aids and associating a selected visual aid with a configurable gauge function; and

outputting a data file for use in preparing at least one sample of the selected gauge type in accordance with the gauge functions corresponding to the selected visual aids.

6. A method as in claim 5, where the configurable gauge functions are located at fixed locations in the image.

7. A method as in claim 5, where the configurable gauge functions are located at user selected locations in the image.

8. A method as in claim 5, where the configurable gauge functions are located at user selected locations in the image, and have a fixed size and shape.

9. A method as in claim 5, where the configurable gauge functions are located at user selected locations in the image, and have at least one of a size and a shape selected by the user.

10. A tool operable to specify a gauge, comprising a graphical user interface for displaying an image of a selected gauge type and for enabling a user of the web tool to specify individual ones of gauge functions using at least one drop down menu, further operable, in response to a selection of at least one type of gauge function, to change the displayed image to correspond to the selected gauge function.

11. A tool as in claim 10, further operable to send a data file for use in preparing at least one sample of the selected gauge type in accordance with the selected gauge functions.

12. A tool operable to enable a user to specify a gauge, comprising a graphical user

interface for displaying an image of a user-selected gauge type, for displaying in association with the selected gauge type a set of visual aids corresponding to configurable gauge functions and for enabling the user to specify individual ones of the configurable gauge functions using said set of visual aids with a drag and drop technique for selecting individual visual aids from the set of visual aids and associating a selected visual aid with a configurable gauge function, said web tool being further operable for outputting a data file for use in preparing at least one sample of the selected gauge type in accordance with the gauge functions corresponding to the selected visual aids.

13. A tool as in claim 12, where the configurable gauge functions are located at fixed locations in the image.

14. A tool as in claim 12, where the configurable gauge functions are located at user selected locations in the image.

15. A tool as in claim 12, where the configurable gauge functions are located at user selected locations in the image, and have a fixed size and shape.

16. A tool as in claim 12, where the configurable gauge functions are located at customer selected locations in the image, and have at least one of a size and a shape that is selected by the user.

17. A method to conduct business over a data communications network, comprising:

in response to a user accessing a server coupled to the network, displaying an image of a user-selected gauge type;

specifying individual ones of a plurality of gauge functions using a plurality of drop down menus; and

in response to a selection of at least one type of gauge function, changing the displayed image to correspond to the selected gauge function for providing the user with an image that corresponds to the selected gauge type having the selected gauge function.

18. A method as in claim 17, further comprising preparing at least one sample of the selected gauge type, in accordance with the selected gauge functions, for delivery to the user.

19. A method as in claim 17, where the data communications network is comprised of the Internet.

20. A method to conduct business over a data communications network, comprising:

in response to a user accessing a server coupled to the network, displaying an image of a user-selected gauge type;

displaying in association with the selected gauge type a set of visual aids corresponding to configurable gauge functions;

specifying individual ones of the configurable gauge functions using said set of visual aids and a drag and drop technique for selecting individual visual aids from the set of visual aids and associating a selected visual aid with a configurable gauge function; and

outputting a data file for use in preparing at least one sample of the selected gauge type, in accordance with the gauge functions corresponding to the selected visual aids.

21. A method as in claim 20, where the data communications network is comprised of the Internet.

22. A method to design at least one user interface element of an instrument, comprising:

displaying an image of a selected instrument type;

specifying, through the use of a graphical user interface, at least one characteristic of the at least one user interface element;

in response to specifying the at least one characteristic, updating the displayed image to

correspond to the specified at least one characteristic; and

developing an output data object for use in obtaining at least one prototype sample of the instrument having the specified at least one characteristic of the at least one user interface element.

23. A method as in claim 22, where specifying comprises using a drag and drop technique.

24. A method as in claim 22, where specifying comprises using a drop down menu technique.

25. A method as in claim 22, where specifying comprises using a drawing tool.

26. A method as in claim 22, where at least a portion of the data object is stored in the instrument for use by a controller in controlling operation of the at least one user interface element.

27. A method as in claim 22, where at least a portion of the data object is stored in a non-volatile memory of the instrument for use by an instrument controller in controlling operation of the at least one user interface element.

28. A method as in claim 22, where at least a portion of the data object is stored in a volatile memory of the instrument for use by an instrument controller in controlling operation of the at least one user interface element.

29. A method as in claim 22, where at least a portion of the data object is stored in the instrument for use by an instrument controller in mapping between at least one instrument input and the at least one user interface element.

30. A method as in claim 22, where specifying uses at least one tool for enabling a user to select at least a placement, a size and a functionality of the at least one user interface element.

31. A method as in claim 22, where displaying displays a blank instrument face, and where specifying uses at least one tool comprising a drawing tool for enabling a user to select at least a placement, a size and a functionality of the at least one user interface element.

32. A method as in claim 22, where the instrument comprises a display, and where the data object is loaded into the instrument for use by an instrument controller in displaying, in cooperation with the display, the at least one specified user interface element.

33. A method as in claim 22, where specifying comprises performing a validity check to ensure that the at least one characteristic that is specified is compatible with the functionality of the at least one user interface element.

34. A method as in claim 22, where specifying comprises re-sizing a displayed user interface element.

35. A method as in claim 22, where specifying comprises changing an orientation of a displayed user interface element.

36. A method as in claim 22, where specifying comprises changing a location of a displayed user interface element.

37. A method as in claim 22, where specifying comprises changing an aspect ratio of a displayed user interface element.

38. A method as in claim 22, where specifying comprises changing a shape of a displayed user interface element.

39. A method as in claim 22, where the instrument comprises a gauge.

40. A method as in claim 32, where the display comprises a two dimensional array of separately addressable pixels.

41. A method as in claim 32, where the display comprises one of a liquid crystal display and a plasma display.

42. A method as in claim 22, where the instrument comprises a plurality of indicators and an overlay placed over the indicators, the overlay having areas selectively removed, and where the data object is loaded into the instrument for use by an instrument controller in displaying, in cooperation with the plurality of indicators and the overlay, the at least one specified user interface element.

43. An instrument comprising:

a display for showing at least one user interface element;

a memory; and

an instrument controller that is coupled to said memory, to said display and to at least one instrument input, said memory storing data for use by said instrument controller in mapping between said at least one instrument input and said at least one user interface element, where

the data comprises data developed during an interactive design process where there was displayed an image of a selected instrument type for enabling a potential customer to specify, through the use of a graphical user interface, at least one characteristic of the at least one user interface element.

44. An instrument as in claim 43, where the data developed during the interactive design process is suitable for use in obtaining at least one prototype sample of the instrument having the specified at least one characteristic of the at least one user interface element.

45. An instrument as in claim 43, where the at least one user interface element comprises a gauge.